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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/884,138 | 06/20/2001 | Mitsuru Uchiyama | AAO-256 | 2473 |

23353 7590 01/15/2003

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WASHINGTON, DC 20036

EXAMINER

PATEL, NIHIR B

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3743

DATE MAILED: 01/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/884,138

Applicant(s)

UCHIYAMA ET AL.

Examiner

Nihir Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 3-6 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Sasso Jr. US Patent No. 5,603,315. Referring to claim 1, Sasso discloses a multiple mode oxygen delivery system that comprises a cylinder 2 (see figure 1) for containing a pressurized oxygen therapeutic gas (see col. 4 lines 20-30); a nasal cannula 26 (see figure 1 and col. 5 lines 15-25), adapted to be introduced into a nasal passage of a patient; a conduit 12 (see figure 1) extending between the cylinder and the nasal cannula 26 for directing the oxygen therapeutic gas to the nasal cannula 26 from the cylinder 2 (see col. 5 lines 15-25); a pressure sensor 6 (see figure 1 and col. 4 lines 53-60), provided on the conduit 12, for detecting the pressure in the conduit 12 (see col. 4 lines 53-60); a valve 18 (see figure 1), provided on the conduit 12, for allowing and blocking the fluid communication between the cylinder 2 and the nasal cannula 26 (see col. 5 lines 8-12); a controller 8 (see figure 1) for controlling the operation of the valve 18 in synchronization with respiration of a patient based on changes in pressure detected by the pressure sensor 6, the controller 8 comparing respiratory frequency with a threshold to increase volume of the oxygen

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therapeutic gas for each respiration in step when the respiratory frequency is larger than the threshold (see col. 7 lines 11-67 and col. 8 lines 1-17).

Referring to claim 3, Sasso shows that the valve 18 is a solenoid valve having a solenoid, and the controller 8 controls the solenoid to open the valve for a time period sufficient for a volume of the oxygen therapeutic gas to flow therethrough for each respiration (see col. 5 lines 8-12 and col. 6 lines 30-44).

Referring to claim 5, Sasso shows that the controller 8 determines the initiation of each respiration by monitoring the changes in the pressure detected by the pressure sensor (see col. 7 lines 10-35).

Referring to claim 6, Sasso shows that the controller 8 calculates the respiratory frequency by measuring the time interval between the initiations of sequential respirations (see col. 7 lines 33-55).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over combined teachings of Sasso Jr. US Patent No. 5,603,315 and Kloeppel US Patent No. 5,865,174.

Sasso discloses the applicant's invention as claimed with the exception of stating that the pressure sensor is an electric capacitor type pressure sensor having a capacitor of which the electrostatic capacitance represents the detected pressure.

Kloeppel discloses a supplemental oxygen delivery apparatus and method that does state that the pressure sensor is an electric capacitor type pressure sensor having a capacitor of which the electrostatic capacitance represents the detected pressure. Therefore it would be obvious to modify Sasso's invention by stating that the pressure sensor is an electric capacitor type pressure sensor having a capacitor of which the electrostatic capacitance represents the detected pressure in order for the invention to function to its fullest capacity.

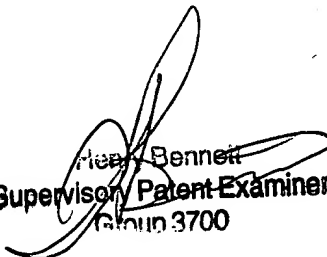
Also the type of pressure sensor used in the invention is simply a matter of design choice as stated in the specification by the applicant. (page 3 lines 21-23; "that the pressure sensor can be any kind of pressure sensor which provides an electric signal representing the pressure in the conduit.").

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Nihir Patel whose telephone number is (703) 306-3463. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful the examiner supervisor Henry Bennett can be reached at (703) 308-0101.

NP
January 3, 2003


Henry Bennett
Supervisory Patent Examiner
Group 3700